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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/775,194

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Hiroshi Tsuchi

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1617

466

7590

11/23/2005

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EXAMINER

NGUYEN, LONG T

ART UNIT

PAPER NUMBER

2816

DATE MAILED: 11/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/775,194	Applicant(s) TSUCHI, HIROSHI	
	Examiner Long Nguyen	Art Unit 2816	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 September 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 19 and 20 is/are rejected.
- 7) ☒ Claim(s) 1-18 and 21-25 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 September 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claims 1-25 are objected to because of the following informalities:

Claim 1, line 7, “operating ranges” should be changed to --operating voltage ranges--.

Claim 1, line 11, all occurrences “operating range” should be changed to --operating voltage range--.

Claims 2-18 and 22-24 are objected to because they include the informality of claim 1.

Claim 18, lines 3, 4, 9 and 10, all occurrences “operating range” on these lines should be changed to --operating voltage range--.

Claim 19, line 10, “operating range” should be changed to --operating voltage range--.

Claims 20 and 21 are objected to because they include the informality of claim 19.

Claim 21, lines 8, “operating ranges” should be changed to --operating voltage ranges--.

Claim 21, lines 13-14, all occurrences “operating range” on these lines should be changed to --operating voltage range--.

Claim 21, line 17-18, “to an input terminal of said first amplifier circuit and/or an input” should be changed to --to at least one of an input terminal of said first amplifier circuit and an input-- for clarification of “and/or” as fixed in other claims and recited in the remark.

Claim 25, line 5, “and/or” should be changed to --and--.

Claim 25, line 14, “operating ranges” should be changed to --operating voltage ranges--.

Claim 25, line 18, all occurrences “operating range” on these lines should be changed to --operating voltage range--.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 19 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Horie et al. (USP 6,054,887).

Note that Figure 1 of the Horie et al. reference discloses a driving circuit, which includes: an input terminal (30) for receiving an a signal voltage (signal at terminal 30); an output terminal (3) for outputting an output signal (signal at terminal 3); an amplifier (1) for charging/discharging the output terminal (3) and for driving a capacitive load (the downstream circuitry connected to output terminal 3 inherently will have capacitance therein so the downstream circuitry is reasonable to be considered as a capacitive load; also note that “for driving a capacitive load” is intended use and the circuitry in Figure 1 is capable of driving any load including the capacitive load) connected to the output terminal (3) based on the signal voltage at the input terminal (30); and an input control circuit (5, 26) for performing control so that a predetermined constant voltage (V_{ref}) within an operating range of the amplifier circuit (see Figure 4) and the signal voltage (30) applied to the input terminal (30) are switched for supply to an input terminal (4) of the amplifier circuit (1); wherein a driving period for driving the output terminal (3) including at least a first period (switch 5 is opened and switch 26 is closed) so that the constant voltage (V_{ref}) is supplied to the input terminal (4) of the amplifier

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(1), and a second period (switch 5 is closed and switch 26 is opened) so that the signal voltage is supplied to the input terminal (4) of the amplifier (1), see line 50 of Col. 6 to line 11 of Col. 7.

Allowable Subject Matter

4. Claims 1-18, 22-24 and 25 would be allowable if amended to overcome the informalities set forth above.

5. Claim 21 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims, and if amended to overcome the informalities set forth above.

Response to Arguments

6. Applicant's arguments filed 9/20/05 have been fully considered but they are not persuasive.

Applicant argues that Horie et al. does not shows a capacitive load, i.e., the circuit in Figure 1 of Horie et al. does not driving a capacitive load connected to the output terminal. However, this argument is not persuasive because the capacitive load coupled to the output of the driving circuit is not part of the driving circuit, so "for driving the capacitive load" is just an intended use for the driving circuit. Clearly, the output terminal (3) in Figure 1 of Horie et al. is capable of driving any load circuit including the capacitive load circuit. Note that, any downstream circuitry connected to output terminal 3 of Figure 1 inherently will have capacitance therein (because every circuit in semiconductor device technology must have at least parasitic capacitance) so the downstream circuitry coupled to the output terminal 3 of Figure 1 is reasonable to be considered as a capacitive load. It is note that a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and

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the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. Clearly, the circuit in Figure 1 of Horie et al. meets all the structures of the driving circuit in claim 19.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directly to Examiner Long Nguyen whose telephone number is (571) 272-1753. The Examiner can normally be reached on Monday to Thursday from 8:00am to 6:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tim Callahan, can be reached at (571) 272-1740. The fax number for this group is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications

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may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

November 21, 2005

A handwritten signature in cursive script, appearing to read 'Long Nguyen', with a long horizontal line extending from the end of the signature.

**LONG NGUYEN
PRIMARY EXAMINER**